THE PRERECTAL CURVILINEAR INCISION FOR PROSTATIC ABSCESS; WITH A REPORT OF THREE CASES.[1]

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The many-sided studies which the operative surgery of prostatic hypertrophy has received during the last two decades have of necessity thrown an indirect light on the allied subject of prostatic abscess. Of recent years, the latter has not received much direct consideration, perhaps because of the relative infrequency of such abscesses, or because their treatment was considered a closed chapter. If we exclude the acute follicular suppurations of the prostate which attend gonorrhœa, suppuration within the parenchyma is relatively rare. It is certainly so with regard to those cases that become the object of operative interference. An examination of the reports of large general hospitals will show that the experience of every surgeon must be limited in the matter of parenchymatous prostatic abscesses; that, too, whether they be of gonorrhœal, metastatic, tubercular origin, or appear as a complication of hypertrophy. The report of the Massachusetts General Hospital for eight years shows only thirteen cases of acute prostatitis, in a total of 25,000 surgical patients. Several of these acute cases were not designated as prostatic abscess.

That these abscesses are sometimes overlooked cannot be questioned. Fortunately, the symptoms both local and general indicate both the nature and seat of the trouble in most cases. In others, however, the abscess assumes a latent form,

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where, without functional disturbance of either urethra or bladder, periprostatic phlegmons of gravest omen are developed. Recently, there was admitted to my ward in the Cincinnati Hospital a man of sixty, who was moribund from septic infection. The autopsy revealed an enormous phlegmon of both ischiorectal fossæ, a gangrene of the anterior rectal wall, and a sloughing prostate gland. Running free through the large cavity were two inches of the intact urethra. The vital resisting power of the urethral wall under stress of sloughing processes around and about it, as seen in extravasation of urine, is often observed. It is a factor to be considered in all perineal operations on the prostate, to which reference will be made later on.

Regarding the diagnosis of prostatic abscess, when the condition is once suspected, there is but little difficulty. The rectal touch, which is never neglected by the surgeon in pathologic conditions of the male pelvis viscera, is, unfortunately, not so often made by the busy practitioner. Therefore its diagnosis is at times not made until invasion of the rectovesical fascia has taken place. But this very invasion decreases the value of the rectal touch for accurately determining the condition of the prostate gland. When once the finger feels a soft, indentable, fluctuating spot underneath the rectal mucosa, it can no longer be determined to what extent the suppuration is intra- or periprostatic. The importance of this observation seems emphasized by the compilation of Segond;[1] in forty-three out of sixty-seven cases, the abscess pointed in the rectum. Furthermore, the value of the rectal touch is diminished in the abscess complicating prostatic hypertrophy. Fortunately, this is counterbalanced by the prominence of other signs, notably, the intermittent urethral discharge which makes the recognition of the secondary infection relatively simple.

A very large proportion of prostatic abscesses, if untreated, open into both rectum and urethra (twenty-one out of sixty-seven). Such cases are either rapidly fatal, or, if recovery ensues, leave urethrorectal fistulæ that are often beyond relief. A dominant factor in determining the method of at-

tacking a prostatic abscess must always be the relation this bears to urethra. In fifty-five out of 115 cases, the abscess opened spontaneously into the urethra or was opened by the beak of a passing instrument. It is self-evident that in this category would be found a large number of follicular abscesses, or such at any rate as would not be deeply placed within the parenchyma. How frequently the urethral drainage of even these superficial abscesses is insufficient is manifested by the chronicity of the discharge and the recurrence of retention symptoms.

Whatever the primary source of their infection, deep-seated prostatic abscesses develop within the gland substance without entangling alliances with either urethra or rectum, although, with the growth of the abscess, there is a tendency to open into either channel in the order given. How this affects the operative treatment of prostatic abscesses seems plain. To go in between urethra and rectum is the direct inference. Nevertheless, the urethral or rectal routes are still recommended. In what I believe is the last edition of Harrison's [2] classical work ("Surgical Diseases of the Genito-Urinary Organs," p. 277), he recommends that the abscess be opened with a urethral sound guided by a finger in the rectum, and has a full-page illustration of the method. Only when the whole prostate is involved does he advise a median perineal incision. The use of the Bottini incisor, recently advised for the same purpose, is a technical improvement of the intra-urethral operation, but based on the same principles, which I believe to be wrong. On the other hand, the transrectal incision of prostatic abscesses still has many advocates in higher quarters. Of two cases from the Heidelberg Clinic of 1902, one was operated on through the rectum.[3] Guiard [4] and Routier,[5] who perhaps reflect the views of many French surgeons, regard the rectal incision as the normal one for opening prostatic abscesses. This seems the more strange in view of the favor which perineal prostatectomy has found with the foremost genito-urinary surgeons of France.

The very gratifying results recently obtained in three

cases of prostatic abscess with the curvilinear prerectal incision without opening the urethra seem to warrant the presentation to you of a brief report.

CASE I.—G. W., aged twenty-four years, was admitted to the Jewish Hospital, January 30, 1902. Family history negative. Had an attack of typhoid fever six years ago. Gonorrhœa, eight months ago. During three or four years has had symptoms of gall-stone colic. The attacks, coming every three or four months, were occasionally followed by jaundice. Has been confined to a London hospital for like attack. Present illness has lasted one week.

Present Condition.—Well-nourished young man, chief complaint, pain in the region of the gall-bladder, over which there is a marked tenderness. Temperature on admission, 102-112° F.; pulse, 110. Physical examination shows great tenderness over the gall-bladder without either enlargement of gall-bladder or liver. Tongue coated, bowels rather constipated. From day of admission, the temperature gradually subsided until from the fifth day after admission to the tenth day it remained normal. On this day there was again an elevation to 102°, which subsided by the thirteenth day, when it was again normal. Diagnosis, cholecystitis, probably of calculous origin.

Operation, February 11, 1902, cholecystotomy. Gall-bladder found considerably thickened and slightly enlarged, but very adherent to omentum, colic arch, and pylorus. These adhesion were readily severed. The incision into the gall-bladder gave vent to a turbid, ropy bile, containing biliary sand in considerable quantity. Gall-stones were not found. The biliary ways were patent. Drainage of gall-bladder. From the day of the operation, the patient's temperature returned to the normal, and remained so until February 18, when there again was a rise to 102°; from this time to the 23d it again remained about normal; when it rose to 103°. It then fell rapidly and continued about normal until March 4. Five days after the cholecystotomy, there appeared a profuse purulent urethral discharge, the examination of which showed an abundance of Neisser diplococcus. Within four days of its presence the patient complained of intense pain in the perineum and rectum and of frequency of micturition. Examination at this time showed a considerably enlarged and exquisitely ten-

der prostate. Hot baths, opium, and belladonna were ordered as required. Notwithstanding the continuance of a normal temperature and normal pulse-rate, the local symptoms increased in severity. Rectal touch revealed fluctuation indistinctly. Diagnosis, prostatic abscess.

Second operation, March 4, 1902. Prerectal curvilinear incision beginning near the tuber ischii of the right side curving around and within an inch of the anal orifice to the same point on the left side. A staff was not used. After the division of the superficial fascia with a few fibres from the external sphincter to the bulbocavernosus, the bulb of the corpus spongiosum and the transverse perineal muscles were readily exposed and drawn forward with a blunt retractor. The rectum was then drawn backward, and in the depth of the wound the fibres of the levator ani and the compressor urethræ were held aside after blunt dissection. By this blunt and almost bloodless dissection the rectum was easily separated from the posterior surface of the prostate gland. The urethra was not opened. With an aspirating needle the abscess within the gland was easily located. It was opened through a median posterior incision. Vent was thus given to about one ounce of thick creamy pus. The examination of this later showed the Neisser diplococcus and the staphylococcus. A small drainage tube was inserted into the abscess cavity, and the large wound, which had somewhat the appearance of the vagina, was readily closed by three silkworm-gut sutures on each side of the middle line. The hæmorrhage during the operation was almost *nil.*

Subsequent History.—From the day of operation, there was not again any elevation of temperature. The discharge decreased rapidly. The patient left the hospital, April 1, entirely well.

Case II.—F. A., age thirty, admitted to Good Samaritan Hospital, March 3, 1902. Referred by Dr. Garlick. First attack of gonorrhœa eight weeks ago. Discharge lasted four weeks and ceased two weeks before he came under physician's observation. With cessation of discharge, the patient noticed a sense of weight in the perineum and pain on defecation. Referred most of his symptoms to the rectum. Symptoms on the part of the bladder and the urethra had been negative since cessation of discharge. Has had neither chill nor elevation of temperature.

Present Condition. — Well-nourished male, short stature, weighing 180 pounds. Complains only of pain in rectum and of tenesmus. Frequency of micturition, temperature, and pulse normal. Blood count shows 6800 leucocytes. Urinalysis. Urine slightly turbid, due to presence of pus cells, otherwise normal. Rectal touch reveals an exquisitely sensitive prostate, considerably enlarged and tense to elasticity. Rectal wall easily movable over posterior surface. Diagnosis, small prostatic abscess.

Operation, Good Samaritan Hospital, March 14, morphia, chloroform narcosis. The operation was made as in the previous case. The exploratory needle revealed a deep-seated abscess, which was evacuated by a small median incision through the posterior wall. The opening was enlarged by the Hilton method. Not to exceed a tablespoonful of pus was evacuated. Culture revealed only the staphylococcus. Drainage as in the previous case was provided for, and the wound was closed.

Subsequent History.—Except for the occasional and slight escape of gas from the drainage tube, from the fourth to the eighth day the recovery was uneventful. The dissection having been made close to the rectal walls, it is probable that a limited necrosis ensued. An examination of the rectum seemed uncalled for, and was not made. The patient left the hospital eighteen days after the operation, entirely recovered. He presented himself for examination, April 29, stating that he had resumed his work for the past three weeks and felt entirely well. There was no recurrence of the urethral discharge.

CASE III.—F. B., aged thirty-three years, single, hostler, entered City Hospital May 17, 1902. Had gonorrhœa five or six times. Stated that six weeks ago there developed a new case. It ran its usual course until two weeks ago, when he noticed great pain about the scrotum and great pain in defecation and in the scrotum at that time.

The temperature ranged from 100.5 to 101° F. At his admission was 101°.

Physical Examination.—A well-developed male, weighing nearly 200 pounds. Normal except for urinating symptoms. Patient is unable to urinate without use of the catheter. Examination of the prostate through the rectum shows it to be very tender and slightly enlarged. Operation, May 19. Prerectal

curvilinear incision as in the cases above reported. Abscess located with aspirating needle and opened by median incision. Hæmorrhage very slight. Drainage tube and iodoform-gauze packing.

Subsequent History.—From time of operation, patient's temperature went to the normal. Control of the bladder with normal expulsion of the urine was regained the day following the operation. May 30 the wound has almost healed, the patient is about ready to leave the hospital.

One valid but slight objection has been urged to the prerectal incision. It was encountered in the second case. I refer to the sloughing of the anterior wall followed by a fistula. I imagine that when large prostates are removed, this danger would be somewhat greater. By adhering closely to the prostatic capsule and guiding the cleavage away from the rectum, this danger will be minimized. The advantages of this method of operation fully outweigh this possible, though not probable, wound complication. The difficulty of bringing the prostate into the perineal wound has been extensively considered and various methods devised for this end. Among these might be cited preliminary suprapubic cystotomy or opening of the prevesical space through which the prostate can be pushed towards the perineal wound. Syms [6] has recently devised a rubber bag to be introduced into the bladder through a boutonniére, then to be filled with water and used for drawing the prostate into the wound. I have found none of these devices necessary in reaching the prostate, and believe that the same can be accomplished by the use of a short-beaked stone searcher, which by being firmly depressed can be made to bring the prostate within easy access for any manipulation that might be needed. In prostatic hypertrophy, when a major operation is indicated and the opening of the urethra is not essential, the method of reaching the gland as above indicated will, I think, give the best results.

The first case presented is of interest from the view-point

of diagnosis. In the absence of the finding of the prostatic abscess by the second operation, the conditions found at first would have been deemed sufficient to explain the symptoms. Two years before this operation, the diagnosis of cholecystitis had been made in a London hospital; although no acute inflammatory conditions were found in the gall-bladder or biliary ways, it still seems probable that the prostatic abscess developed during the convalescence from the first operation. The salient features of the second case were the predominance of the rectal symptoms and the absence of all signs pointing to a serious involvement of the prostate. In both cases there was conspicuous by its absence the complex of symptoms usually associated with prostatic as with other deep-seated abscesses, namely, rigor, pyrexia, and rapid pulse-rate. The interpretation of this might be found in the fact that the suppuration was inclosed within the tight capsule of the gland, which made absorption difficult. It is with the invasion of the loose periprostatic connective tissue by the suppuration that the systemic symptoms develop, much as they do in the periadenitis following the mixed infections of the cervical glands.

If we exclude as thoroughly uncommendable the rectal methods of incising prostatic abscesses, there remain only for our consideration the various perineal incisions, of which I may be permitted to make a brief comparison. The median incision must always hold a prominent place for the quick exploration of the deep urethra, prostate, and bladder, but the field of its usefulness wil grow more and more restricted with the betterment of diagnostic methods and the substitution of the crushing for the cutting operation for stone. Its chief merit is in its relative bloodlessness. This advantage is, however, largely lost in prostatic subjects because of the difficulty of avoiding the bulb, which is often enlarged, and because of the difficulty of hæmostasis, when hæmorrhage does occur. The limited field of operation makes the sense of touch rather than that of sight the guide of operative manipulation. This is one of its faults. The opening of the membranous urethra, a *sine qua non* of the

median operation, is another and very serious one. However desirable this may be when bladder drainage is demanded, it subjects the patient often to the inconvenience of temporarily losing control of the bladder, and unfortunately often leaves an embarrassing urethral fistula. I have seen this in a number of cases of gonorrhœal and of tubercular abscess operated upon in this way. On the other hand, the prerectal incision as before described does away with this danger altogether. It allows a free inspection of the field of operation, such as can be obtained by no other method. Hæmostasis, not very difficult, can be done in plain sight, and, unless special indications exist for opening the urethra, this can be absolutely avoided as in the cases above reported. In subjects with enlarged or inflamed prostates the submucous plexus of veins is turgid. Those familiar with suprapubic prostatectomy know the severe bleeding which immediately follows the incision of the mucosa. In the operation of prostatectomy by median incision, the hæmorrhage is as free, but its source is not patent. By avoiding the opening of the urethra wherever possible, this grave element of danager is largely eliminated. In the judgment of the writer, it was a retrograde step when operators receded from the original idea of Dittel, not to open the urethra in perineal prostatectomy. The ease with which everything in front of the incision—bulb, transverse perineal muscles, and even membranous urethra—can be drawn forward reduces to a minimum the danger of hæmorrhage. The division of the superficial perineal vessels occurs in an open wound, where they can easily be seen and tied.

Various modifications of the prerectal operation have been made, all making far greater room for operative work. In the operation for prostatic abscess, the prerectal incision alone will suffice. For the major operation of prostatectomy, an incision made from the right extremity of the initial cut into the ischiorectal fossa and carried around the right side of the anus towards the coccyx affords an abundance of room for the thorough isolation of the prostate before its removal is com-

menced. This operation, devised by Gosset and Proust,[7] permits the operator to displace the rectum backward and to the left. I have not had an opportunity of doing the operation on the living, but on the cadaver. It has seemed to me ideal.

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